

COSPAR ABSTRACT

Paper Submitted for: B.3-S The Origin, Evolution and Present State of the Moon

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ABSTRACT:

Lunar Figure from Clementine

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The Clementine spacecraft went into Lunar orbit on **21** February 1994 and mapped the moon from a 5 hour, elliptical, polar orbit ending 3 May 1994. To support geodetic studies of the moon, the Clementine spacecraft carried a LIDAR altimeter, a HiRes imaging camera, a UV/Vis camera and a radio system providing doppler and ranging. At the end of the lunar mapping phase, the ground tracks of the altimetry data were nearly evenly spaced at 1 deg intervals at the equator with significant overlap at the poles. The results of data analyses will be presented giving the figure of the moon as a low order harmonic expansion, the center-of-mass offset from center-of-figure and the locations of the principal axes. Implications for the lunar interior composition, heat flow and comparisons with results from previous spacecraft exploration will be presented.

Note: Thomas Duxbury is a member of the Organizing Committee for the COSPAR Lunar Symposium